

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original) A nucleic acid molecule comprising:

- a) two or more target binding domains that target binding of the pre-trans-splicing molecule to a target pre-mRNA;
- b) a 3' splice region comprising a branch point, a pyrimidine tract and a 3' splice acceptor site and a 5' splice donor site;
- c) spacer regions that separate the 3' splice region and the 5' splice donor site from the target binding domains; and
- d) a nucleotide sequence to be *trans*-spliced to the target pre-mRNA; wherein said nucleic acid molecules is recognized by nuclear splicing components within the cell.

Claim 2 (original) The nucleic acid molecule of claim 1 wherein the spacer regions separate the 3' splice region and the 5' splice donor site from the target binding domains.

Claim 3 (original) The nucleic acid molecule of claim 1 wherein the nucleic acid molecule further comprises sequences encoding a translatable protein product.

Claim 4 (original) The nucleic acid molecule of claim 3 wherein the translatable protein product is a toxin.

Claim 5 (original) The nucleic acid molecule of claim 1 wherein the nucleic acid molecule further comprises sequences containing a translational stop codon.

Claim 6 (currently amended) The molecule of claim 1 wherein the nucleotide sequence to be *trans*-spliced to the target pre-mRNA comprises nucleotide sequences encoding the human cystic fibrosis trans-membrane conductance regulator.

Claim 7 (currently amended) The molecule of claim 6 wherein the nucleotide sequences encoding the human cystic fibrosis trans-membrane conductance regulator comprise exon 10 of the human cystic fibrosis trans-membrane regulator conductance gene.

Claim 8 (original) A recombinant expression vector wherein said vector expresses a nucleotide sequence comprising:

- a) two or more target binding domains that target binding of the pre-trans-splicing molecule to a target pre-mRNA;
- b) a 3' splice region comprising a branchpoint, a pyrimidine tract and a 3' splice acceptor site and a 5' splice donor site;
- c) spacer regions that separate the 3' splice region and the 5' splice donor site from the target binding domains; and
- d) a nucleotide sequence to be *trans*-spliced to the target pre-mRNA; wherein said nucleic acid molecule is recognized by nuclear splicing components within the cell.

Claim 9 (original) The molecule of claim 1 or 8 further comprising a safety nucleotide sequence comprising one or more complementary sequences that bind to one or more sides of the pre-trans-splicing molecule branch point, pyrimidine tract, 3' splice site or 5' splice site.

Claim 10 (original) A cell comprising a nucleic acid molecule wherein said nucleic acid molecule comprises:

- a) two or more target binding domains that target binding of the pre-trans-splicing molecule to a target pre-mRNA;

b) a 3' splice region comprising a branch point, a pyrimidine tract and a 3' splice acceptor site and a 5' splice donor site;

c) spacer regions that separate the 3' splice region and the 5' splice donor site from the target binding domains; and

d) a nucleotide sequence to be *trans*-spliced to the target pre-mRNA; wherein said nucleic acid molecules is recognized by nuclear splicing components within the cell.

Claim 11 (original) The cell of claim 10 wherein the spacer regions of the nucleic acid molecule separate the 3' splice region and the 5' splice donor site from the target binding domains.

Claim 12 (original) The cell of claim 10 wherein the nucleic acid molecule further comprises sequences encoding a translatable protein product.

Claim 13 (original) The cell of claim 12 wherein translatable protein is a toxin.

Claim 14 (original) The cell of claim 10 wherein the nucleic acid molecule further comprises a nucleotide sequence containing a translational stop codon.

Claim 15 (currently amended) The cell of claim 10 wherein the nucleotide sequence to be *trans*-spliced to the target pre-mRNA comprises nucleotide sequences encoding the human cystic fibrosis transmembrane conductance regulator.

Claim 16 (currently amended) The cell of claim 10 wherein the nucleotide sequences encoding the human cystic fibrosis transmembrane conductance regulator comprise exon 10 of the human cystic fibrosis transmembrane conductance regulator gene.

Claim 17 (original) A cell comprising a recombinant expression vector wherein said vector expresses a nucleotide sequence comprising:

a) two or more target binding domains that target binding of the *pre-trans*-splicing molecule to a target pre-mRNA;

b) a 3' splice region comprising a branchpoint, a pyrimidine tract and a 3' splice acceptor site and a 5' splice donor site;

c) spacer regions that separate the 3' splice region and the 5' splice donor site from the target binding domains; and

d) a nucleotide sequence to be *trans*-spliced to the target pre-mRNA; wherein said nucleic acid molecules is recognized by nuclear splicing components within the cell.

Claim 18 (original) A cell comprising the nucleic acid molecule of claim 1 or 8 further comprising a safety nucleotide sequence comprising one or more complementary sequences that bind to one or more sides of the *pre-trans*-splicing molecule branch point, pyrimidine tract, 3' splice site or 5' splice site.

Claim 19 (original) A method of producing a chimeric mRNA molecule comprising contacting a *pre-trans*-splicing molecule with a target pre-mRNA under conditions in which a double *trans*-splicing reaction results in a portion of the *pre-trans*-splicing molecule being *trans*-spliced to a portion of the target pre-mRNA to form said chimeric mRNA.

Claim 20 (currently amended) The method of claim 19 wherein the *pre-trans*-splicing mRNA comprises nucleotide sequences encoding the human cystic fibrosis transmembrane conductance regulator.

Claim 21 (currently amended) The method of claim 19 wherein the *pre-trans*-splicing mRNA comprises exon 10 of the human cystic fibrosis transmembrane conductance regulator gene.

Claim 22 (original) A method of providing a host cell with a chimeric mRNA molecule, said method comprising:

transferring a *pre-trans*-splicing molecule to a host cell expressing a target pre-mRNA wherein the *pre-trans*-splicing molecule binds to the target pre-mRNA under conditions in which a double *trans*-splicing reaction results in a portion of the *pre-trans*-splicing molecule being *trans*-spliced to a portion of the target pre-mRNA to form said chimeric mRNA.

Claim 23 (original) The method of claim 20 wherein the host cell is a human cell.

Claim 24 (original) The method of claim 20 wherein the *pre-trans*-splicing molecule comprises nucleotide sequences encoding a protein that is defective or lacking in the host cell.

Claim 25 (currently amended) The method of claim 22 wherein the *pre-trans*-splicing molecule comprises nucleotide sequences encoding a fragment of the human cystic fibrosis trans-membrane regulator protein.

Claim 26 (original) A pharmaceutical composition comprising the nucleic acid molecule of claim 1 and a pharmaceutically acceptable carrier.

Claims 27-53 (canceled)